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PATENT

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : John A. Arcadi
Application No. : 09/383,114
Filed : August 25, 1999
Title : COMPOSITION AND METHOD FOR
TREATING CARCINOMA (as amended)

Grp./Div. : 1614
Examiner : J. Goldberg
Docket No. : 35687/RWJ/H29

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Linda
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DECLARATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Post Office Box 7068
Pasadena, CA 91109-7068

Commissioner:

I, Lawrence W. Jones, declare that:

1. I am a licensed physician in the State of California. I am also the Director of Prostate Research Program at Huntington Medical Research Institutes (HMRI), a non-profit medical research organization and the assignee of the above patent application. I have been working in the field of treating prostate cancer for more than 28 years, and have worked as an unpaid volunteer for HMRI since 1974. I am thoroughly familiar with the patent application, and I have no financial interest in it.

2. The patent application discloses the use of rhodamine-123 for treating hormone-refractory prostate cancer, which kills 40,000 men annually in the United States. Before this invention, there was no known life-prolonging treatment for this disease.

3. I am also familiar with the Office action dated 03/11/02, and with an Amendment filed November 6, 2001 (erroneously referred in the Office action as "filed on 08 January 2002"). The Office action contends that the original disclosure of the patent application does not support certain material added by the Amendment, namely, the word "carcinoma" and the term "one of many carcinomas, such as cancer of the breast, liver, pancreas, bladder, lung, skin, colon, and the like." As explained below,

the material objected to in the Office action, is not "new matter". It merely states the meaning of "carcinoma", as it has long been understood by ordinary workers in the field of oncology.

4. The present patent application, and each of its two parent applications, originally disclosed the treatment of carcinoma. For example, the present application describes in detail how to treat prostate cancer with rhodamine-123. It was well known to physicians and other workers in the field of oncology long before the filing date of the present application that prostate cancer is one form of carcinoma, and that carcinoma is any of the various types of malignant tumor derived from epithelial tissue, including cancer of the breast, liver, pancreas, bladder, lung, skin, and colon, as well as other organs of the human body. See Stedman's Medical Dictionary, 24th Edition, published 1982, page 223, which is attached as Exhibit "A".

5. The patent application, as originally filed, states on page 1, line 24, that "Rh-123 is selectively toxic for carcinoma cells." Accordingly, the patent application as originally filed makes clear to ordinary workers in this field that rhodamine-123 is useful for treating carcinoma, such as prostate cancer.

6. The application also makes it clear how to administer rhodamine-123 safely to patients, so that the efficacy of the drug for treating all types of carcinoma can be determined by routine experiments.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date 7/22/2002

By Lawrence W. Jones M.D.
Lawrence W. Jones, M.D.

RWJ/mas

Attachment : Exhibit A

RWJ PAS449743.1-7/22/02 11:05 AM

ILLUSTRATED
Stedman's
MEDICAL
DICTIONARY

24TH EDITION



WILLIAMS & WILKINS
Baltimore/London

carbon

bo-an-jī-og-rā-ft). A form carbon dioxide is injected

nyloxycarbonyl.
ee carbonium.
ohemoglobin.
n for enzymes that hydro-

ass name for the aldehydic
ydric alcohols, the name
that the most common
ave formulas that may be
ose, $C_6(H_2O)_6$; sucrose,
not true hydrates and the
mer. The group includes
all molecules, such as the
s, disaccharides, etc.), as
ices such as starch, glyco-
des). The c.'s most typical
drogen, and oxygen only.
mediates in tissue contain
harides are c.'s combined

erm denoting the excretion
in the urine, e.g., glucose,
thus including such condi-
t, galactosuria, lactosuria.

carbolize.

n). 1. See Ziehl's stain. 2.

d carbolic acid (phenol).
G. *ouron*, urine]. The pre-
in the urine.

'lic acid cross-linked with a
ce, a poly (acrylic acid) or
nt for pharmaceuticals.

nonmetallic tetravalent ele-
atomic weight 12.01. It has
d ^{12}C (the former, set at
for all molecular weights),
isotopes of interest, ^{12}C and
pure forms, diamond and
arcoal, coke, and soot; and
compounds are found in all
y of its vast number of
of organic chemistry.

of *N*-carboxybiotin (biotin
orm in which c. dioxide is
to form β -methylglutaco-
and to acetyl-CoA to form
CoA carboxylase.

of a sugar: C-1 of an aldose.

lene.
ydride; carbonic acid gas.
ision of c. with an excess of
ss than 99.0% by volume of
mulant.

olid c. dioxide; used in the
i, and other skin affections.

: CS₂; an extremely flamma-
characteristic ethereal odor,
isiticide, but is seldom used

odorless, and poisonous gas
bustion of c.; its toxic action
for hemoglobin and cyto-
sport and blocking oxygen

omethane; CCl₄; a colorless,
teristic ethereal odor resem-
used as a cleansing fluid and

carbon

as a fire extinguisher, and has been used as an anthelmintic,
especially against hookworm.

carbon-11 (^{11}C). A cyclotron-produced, positron-emitting radioisotope of carbon with a half-life of 20 minutes.

carbon-12 (^{12}C). The standard of atomic mass, 98.89 per cent of natural carbon.

carbon-13 (^{13}C). A natural isotope, 1.11 per cent of natural carbon.

carbon-14 (^{14}C). A beta-emitter with a half-life of 5730 years, widely used as a tracer in studying various aspects of metabolism, notably photosynthesis; naturally occurring ^{14}C , arising from cosmic rays, is used to date relics containing natural carbonaceous materials.

carbonate. A salt of carbonic acid; CO_3^{2-} .

c. dehydratase (EC 4.2.1.1), c. hydro-lyase; carbonic anhydrase; a zinc-containing enzyme in red blood cells that catalyzes the conversion of carbon dioxide (CO_2) entering the blood from the tissues into carbonic acid (H_2CO_3). The reverse reaction occurs when the blood reaches the lungs and carbon dioxide is liberated.

c. hydro-lyase, c. dehydratase.

carbon'ic. Relating to carbon.

carbon'ic acid. H_2CO_3 , formed from H_2O and CO_2 .

carbon'ic anhy'drase. Carbonate dehydratase.

carbon'ic anhy'dride. Carbon dioxide (1).

carbon'ium. An organic cation in which the positive charge is on a carbon atom. It is now recommended that carbocation be used as the class name and carbenium (CH_3^+) be used for specific compound names.

carb'onize. To char.

carbonom'eter [L. *carbo* (carbon-), coal, + G. *metron*, measure]. An obsolete device for determining the proportion of carbon dioxide in the air or expired breath by the precipitation of calcium carbonate from lime water.

carbonom'etry. Carbometry; an obsolete method for the determination of the presence and the proportion of carbon dioxide by means of the carbonometer.

carbonu'ria. Rarely used term denoting the excretion of carbon dioxide or other carbon compounds in the urine.

carbonyl. The characteristic group, $-CO-$, of the ketones, aldehydes, and organic acids.

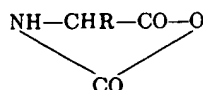
carborun'dum. Carbide of silicon; SiC ; a substance of extreme hardness used for polishing in place of emery.

carb'oxamide. Aminocarbonyl; a molecular configuration ($-CONH_2$) that, together with the related carboximides (aminocarbonyls) ($-CONH-$), is a constituent of many hypnotics, including barbiturates, hydantoins, and thiazides.

carb'oxy-. Combining form indicating addition of CO or CO_2 .

***N*-carboxyamin'ic acid anhydrides**. See *N*-carboxyanhydrides.

***N*-carb'oxyanhy'drides**. Heterocyclic derivatives of amino acids from which polypeptides may be synthesized.



N-Carboxyanhydride

carb'oxycathop'sin. Dipeptidyl carboxypeptidase.

carb'oxydis'mutase. Ribulosebiphosphate carboxylase.

carb'oxyhemoglo'bin (HbCO). Carbon monoxide hemoglobin; a fairly stable union of carbon monoxide with hemoglobin. The formation of c. prevents the normal transfer of carbon dioxide and oxygen during the circulation of blood; thus, increasing levels of c. result in various degrees of asphyxiation, including death.

carb'oxyhemoglobine'mia. The presence of carboxyhemoglobin in the blood.

carb'oxyl. The characterizing group ($-COOH$) of certain organic acids; e.g., $HCOOH$ (formic acid), CH_3COOH (acetic acid), etc.

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carcinoma

carb'oxylase. One of several carboxy-lyases, trivially named carboxylases or decarboxylases (EC group 4.1.1), catalyzing the addition of CO_2 to all or part of another molecule to create an additional $-COOH$ group (e.g., ribulosebiphosphate carboxylase, EC 4.1.1.39).

carb'oxyla'tion. Addition of CO_2 to an organic acceptor, as in photosynthesis, to yield a $-COOH$ group; catalyzed by carboxylases.

carb'oxyltrans'ferases (EC group 2.1.3). Transcarboxylases; enzymes transferring carboxyl groups from one compound to another.

carb'oxypep'tidases. Hydrolases removing the amino acid at the free carboxyl end of a polypeptide chain.

carb'oxypeptidase A (EC 3.4.17.1). Carboxypolypeptidase; a hydrolase that releases C-terminal amino acids, with exception of arginine, lysine, and proline.

carb'oxypeptidase B (EC 3.4.17.2). Protaminase; a hydrolase that releases C-terminal lysine or arginine preferentially.

carb'oxypeptidase C. Acid carboxypeptidase.

carb'oxypeptidase G. γ -Glutamyl hydrolase.

carb'oxypolypeptidase. Carboxypeptidase A.

***N*-carb'ox'yurea**. Allophanic acid.

carbuncle (kar'bung-kl) [L. *carbunculus*, dim. of *carbo*, a live coal, a carbuncle. CARB-]. 1. Deep-seated pyogenic infection of several contiguous hair follicles, with formation of connecting sinuses; often preceded or accompanied by fever, malaise, and prostration. 2. Anthrax (1).

kidney or renal c., severe inflammation within the kidney, usually resulting from the coalescence of multiple intrarenal abscesses into a massive intrarenal nest of infection which may open into the renal pelvis or may extend outward and give rise to perinephric abscess.

carbun'cular. Relating to a carbuncle.

carbunculo'sis. A condition marked by the occurrence of several carbuncles simultaneously or within a short period of time.

carb'ure't. 1. Archaic for carbide. 2. To combine with carbon. 3. To enrich a gas with volatile hydrocarbons, as in a carburetor.

carbu'tamide. Aminophenobutane; 1-butyl-3-sulfanilylurea; an oral hypoglycemic agent.

carb'uterol hydrochloride. [5-[2-(*tert*-Bu-tylami-no)-1-hydroxyethyl]-2-hydroxyphenyl] urea monohydrochloride; a sympathomimetic drug with bronchodilatory activity.

carcass (kar'kas) [F. *carcasse*, fr. It. *carcassa*]. 1. The body of a dead animal. 2. In butcher's terminology, refers to animals used for human food; the body after the head, tail, extremities, and viscera have been removed.

carcin-. See *carcino-*.

carcino-, carcin- [G. *karkinos*, crab, cancer. CARC-]. Combining form relating to cancer.

carcinogen (kar'si-no-jen). Any cancer-producing substance. The most potent c.'s, including those isolated from coal tar, are polycyclic aromatic hydrocarbons.

car'cinogen'es'is [carcino- + G. *genesis*, generation]. The origin or production of cancer, including carcinomas and other malignant neoplasms.

car'cinogen'ic. Cancerogenic; causing cancer.

car'cinolyt'ic [carcino- + G. *lytikos*, causing a solution]. Destructive to the cells of carcinoma.

CARCINOMA

carcinoma (CA) (kar'si-no'mah) [G. *karkinōma*, fr. *karkinos*, cancer, + suffix *-oma*, tumor]. Any of the various types of malignant neoplasm derived from epithelial tissue in several sites, occurring more frequently in the skin and large intestine in both sexes, the bronchi, stomach, and prostate gland in men, and the breast and cervix in women. C.'s are identified histologically on the basis of invasiveness and the changes that indicate anaplasia, i.e., loss of polarity

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